WHAT IS CLAIMED IS:

1. A method for decoding an MPEG video signal for display, the method comprising the steps of:

determining whether said MPEG video signal contains a non full-pel motion vector;

if said MPEG video signal contains said non full-pel motion vector, converting said non full-pel vector to a full-pel motion vector; and,

producing a motion compensated MPEG video picture based on said converted full-pel motion vector.

2. The method of claim 1, wherein said non full-pel motion vector comprises one of a quarter-pel motion vector, a half-pel motion vector, and a fractional-pel motion vector.

3. The method of claim 1, further comprising producing a motion compensated MPEG video picture based on said full-pel motion vector if said MPEG video signal contains said full-pel motion vector.

4. The method of claim 1, further comprising decoding a compressed video data stream including a plurality of macroblocks formed of an array of the digital pixel data; and, performing a full-pel motion compensation on every macroblock regardless of the types of motion vectors.

5. The method of claim 1, wherein the step of converting said non full-pel vector to a full-pel motion vector further comprises rounding an odd number vector to the nearest even number vector.

6. The method of claim 1, wherein the step of converting said non full-pel vector to said full-pel motion vector is performed on one of P frame, B frame, and a combination of P and B frames.

7. A method for improving the decoding efficiency of an encoded data video signal employing an MPEG digital video decoder having a variable length code (VLD) decoder, an inverse quantizer (IQ), an inverse discrete cosine transformer (IDCT), a motion compensator (MC), and a complexity selector, the method comprising the steps of:

receiving a compressed video data stream having a motion vector associated therewith at said VLD and producing decoded data therefrom;

simultaneously, determining the type of motion vectors from said decoded data;

dequantizing said decoded data using said IQ to generate dequantized, decoded data;

employing said IDCT for transforming said dequantized, decoded data from a frequency domain to a spatial domain to produce difference data;

employing said MC for performing a full-pel motion compensation on every macroblock regardless of the types of motion vectors to generate a reference data; and,

combining said reference data and said difference data to produce motion compensated pictures.

8. The method of claim 7, wherein the step of determining the type of motion vectors from said decoded data further comprises determining whether the motion vector is one of a quarter-pel motion vector, a half-pel motion vector, and a fractional-pel motion vector.

9. The method of claim 8, further comprises converting the motion vector to a full motion vector.

10. The method of claim 9, wherein the step of converting the motion vector to said full-pel vector further comprises rounding an odd number vector to the nearest even number vector.

11. The method of claim 10, wherein the step of converting the motion vector to said full-pel motion vector is performed on one of P frame, B frame, and a combination of P and B frames.

12. A programmable video decoding system, comprising:

a variable length decoder (VLD) configured to receive and decode a stream of MPEG video signals with a motion vector associated therewith, said VLD being operative to output quantized data from said decoded MPEG video signals;

a complexity selector configured to detect a motion vector type from said decoded MPEG video signals and to convert said detected motion vector to a full-pel motion vector;

an inverse quantizer (IQ) coupled to receive the output of said VLD to operatively inverse quantize the quantized data received therein;

an inverse discrete cosine transformer (IDCT) coupled to the output of said IQ for transforming the dequantized data from a frequency domain to a spatial domain;

a motion compensator (MC) coupled to the output of said complexity selector for performing a full-pel motion compensation regardless of the types of motion vectors; and,

an adder for receiving output signals from said MC and said IDCT to form motion compensated pictures.

13. The system of claim 12, wherein the motion vector type comprises one of a quarter-pel motion vector, a half-pel motion vector, and a fractional-pel motion vector.

14. The system of claim 12, wherein said complexity selector converts the motion vector to said full-pel vector by rounding an odd number vector to the nearest even number vector.

15. The system of claim 10, wherein said complexity selector converts the motion vector to said full-pel vector on one of P frame, B frame, and a combination of P and B frames received therein.